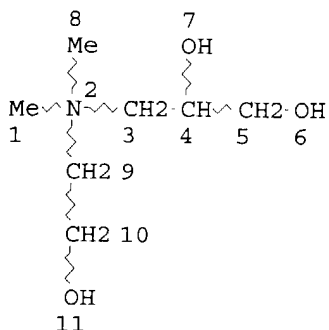


=&gt; d que 19

L1 STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

## STEREO ATTRIBUTES: NONE

L3 2 SEA FILE=REGISTRY SSS FUL L1

L9 1 SEA L3

=&gt; dup rem 14 19

FILE 'HCAPLUS' ENTERED AT 15:01:17 ON 23 SEP 2004

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FILE 'USPATFULL' ENTERED AT 15:01:17 ON 23 SEP 2004

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PROCESSING COMPLETED FOR L4

PROCESSING COMPLETED FOR L9

L10 5 DUP REM L4 L9 (0 DUPLICATES REMOVED)

ANSWERS '1-4' FROM FILE HCAPLUS

ANSWER '5' FROM FILE USPATFULL

=&gt; d l10 ibib abs hitstr 1-5

L10 ANSWER 1 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 2000:98703 HCAPLUS

DOCUMENT NUMBER: 132:153667

TITLE: Preparation of cationic surfactants containing ester group and having good water solubility

INVENTOR(S): Kim, Dong-Il; Kim, Tae-Seong; Rang, Moon-Jeong

PATENT ASSIGNEE(S): LG Chemical Ltd., S. Korea

SOURCE: PCT Int. Appl., 19 pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent

LANGUAGE: English

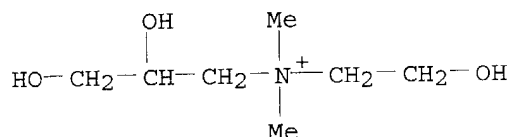
FAMILY ACC. NUM. COUNT: 1

## PATENT INFORMATION:

| PATENT NO.   | KIND | DATE     | APPLICATION NO. | DATE       |
|--|------|----------|-----------------|------------|
| WO 2000006679  | A1   | 20000210 | WO 1999-KR407   | 19990727   |
| W: CN, ID, IN, JP, US, VN  |      |          |                 |            |
| RW: AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE |      |          |                 |            |
| KR 2000011984  | A    | 20000225 | KR 1999-30497   | 19990727   |
| JP 2002521492  | T2   | 20020716 | JP 2000-562463  | 19990727   |
| US 6414170   | B1   | 20020702 | US 2001-744349  | 20010123   |
| PRIORITY APPLN. INFO.:   |      |          | KR 1998-30208   | A 19980727 |
|  |      |          | WO 1999-KR407   | W 19990727 |

OTHER SOURCE(S): MARPAT 132:153667

- AB A cationic surfactant having excellent softness, antistatic properties, biodegradability, etc. is due to having an ester group and a hydrophilic hydroxyl group. A cationic surfactant is prepared by reacting tertiary amine derivs., fatty acid, and epihalohydrin, and prepared simply by reacting esterification and quaternary reactions in one step with a high yield. The cationic surfactant is a high grade alkyl quaternary ammonium compound  $[A(CH_2)_nN^+(R_1)_2CH_2CH(OH)CH_2O_2CR_2]X^-$  where  $R_1 = C1-4$ -alkyl;  $R_2 = C7-21$  linear or branched alkyl or alkenyl group;  $A = OCOR_3$ ,  $NHCOR_3$  or  $OH$ ;  $R_3 = C7-21$  linear or branched alkyl or alkenyl group;  $X =$  halogen; and  $n = 2-6$ .
- IT **110528-96-6DP**, esters with mixts. of stearic acid and palmitic acid  
 RL: IMF (Industrial manufacture); PRP (Properties); PREP (Preparation)  
 (surfactant, biodegradability; cationic surfactants containing hydroxyl and ester group)
- RN 110528-96-6 HCAPLUS
- CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L10 ANSWER 2 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1990:8680 HCAPLUS

DOCUMENT NUMBER: 112:8680

TITLE: High-yield azo dye compositions for natural and synehetic polyamide textiles

INVENTOR(S): Ruzicka, Karel; Maxa, Milan; Suk, Jiri

PATENT ASSIGNEE(S): Czech.

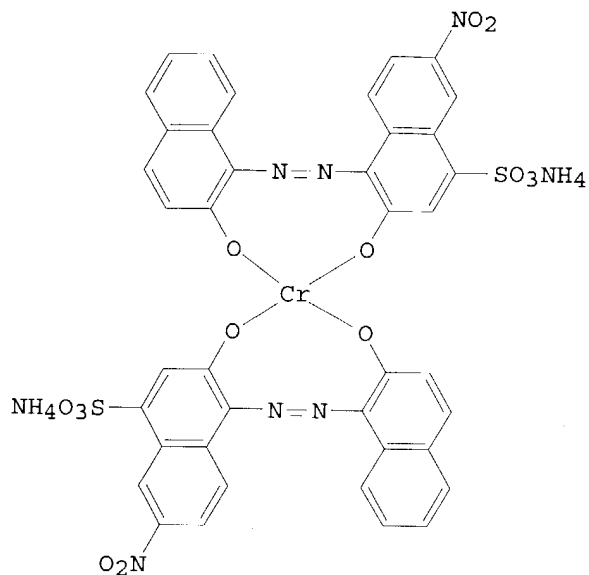
SOURCE: Czech., 3 pp.

CODEN: CZXXA9

DOCUMENT TYPE: Patent

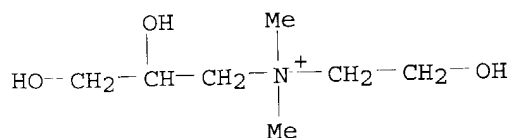
LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.                   | KIND | DATE     | APPLICATION NO. | DATE     |
|------------------------------|------|----------|-----------------|----------|
| CS 255187                    | B1   | 19880215 | CS 1986-3779    | 19861208 |
| PRIORITY APPLN. INFO.:<br>GI |      |          | CS 1986-3779    | 19861208 |



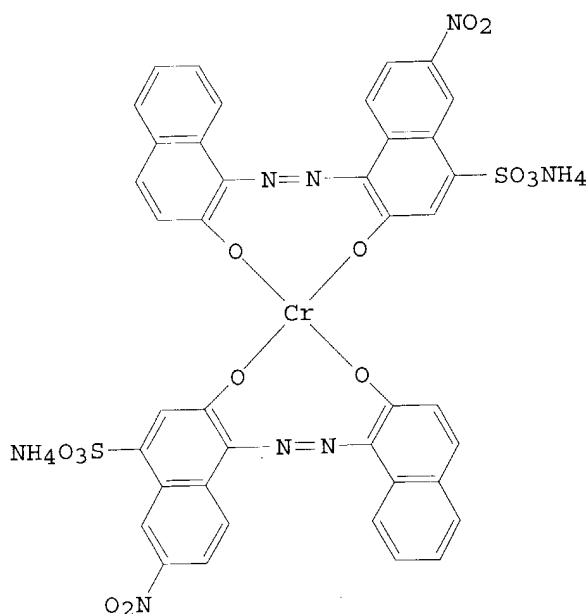
I

- AB The title composition, useful for dyeing and printing of wool, silk, and polyamide textiles with a high dyeing yield, consists of the 1:2 Cr-complex dye I 65-75, cationic surfactant [ROCH<sub>2</sub>CH(OH)CH<sub>2</sub>NMe<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH]+X<sup>-</sup> (II), (R = C<sub>10</sub>-18 alkyl; X = halogen) 1-3, and fillers (inorg. electrolytes, sugars, urea, oils as antidusting agents) 22-34%. These compns. reduce the concentration of I in waste waters and are prepared by mixing of the liquid components and spray or fluid drying. I (75 parts) was mixed at 60° with 7 parts of a 30% aqueous solution of II and 25 parts Na<sub>2</sub>SO<sub>4</sub> and spray dried at 90-200°, giving a composition for use in neutral baths containing (NH<sub>4</sub>)<sub>2</sub>SO<sub>4</sub>.
- IT **121850-91-7D**, C<sub>10</sub>-18 alkyl ethers, halide salts  
 RL: USES (Uses)  
 (surfactants, 1:2 chrome-complex azo dyeing compns. containing, for polyamide textiles)
- RN 121850-91-7 HCAPLUS
- CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 3 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN  
 ACCESSION NUMBER: 1989:479837 HCAPLUS  
 DOCUMENT NUMBER: 111:79837  
 TITLE: Chrome-complex azo dye preparations  
 INVENTOR(S): Ruzicka, Karel; Maxa, Milan; Suk, Jiri  
 PATENT ASSIGNEE(S): Czech.  
 SOURCE: Czech., 3 pp.  
 CODEN: CZXXA9  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Czech  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

| PATENT NO.             | KIND             | DATE     | APPLICATION NO. | DATE     |
|------------------------|------------------|----------|-----------------|----------|
| CS 254617              | B1               | 19880115 | CS 1986-3778    | 19860523 |
| PRIORITY APPLN. INFO.: |                  |          | CS 1986-3778    | 19860523 |
| OTHER SOURCE(S):       | MARPAT 111:79837 |          |                 |          |
| GI                     |                  |          |                 |          |



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AB The title preps., containing the Cr complex dye I 65-75, cationizing agents  
 [ROCH<sub>2</sub>CH(OH)CH<sub>2</sub>N(Me)<sub>2</sub>CH<sub>2</sub>CH<sub>2</sub>OH]<sup>+</sup> X<sup>-</sup> (II) (R = C<sub>10</sub>-18 alkyl; X = halogen)  
 1-3, and fillers (inorg. electrolytes, sugars, urea, oily antidusting

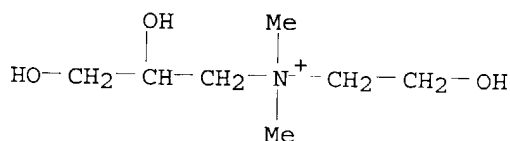
additives) 22-34%, give fast black prints and shades on wool, silk, and polyamide textiles with high I utilization. A typical preparation contains I 70, II 3, and Na<sub>2</sub>SO<sub>4</sub> 27 parts.

IT 121850-91-7D, C10-18 alkyl ethers

RL: RCT (Reactant); RACT (Reactant or reagent)  
(in chrome dye preps. for textile printing)

RN 121850-91-7 HCAPLUS

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl- (9CI) (CA INDEX NAME)



L10 ANSWER 4 OF 5 HCAPLUS COPYRIGHT 2004 ACS on STN

ACCESSION NUMBER: 1987:636676 HCAPLUS

DOCUMENT NUMBER: 107:236676

TITLE: Intramolecular cyclization products from alkanolamines and epichlorohydrin

AUTHOR(S): Buriks, Rudy S.; Lovett, Eva G.

CORPORATE SOURCE: Petrolite Corp., St. Louis, MO, 63119, USA

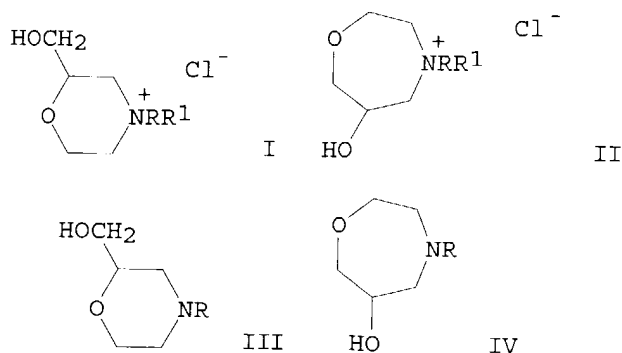
SOURCE: Journal of Organic Chemistry (1987), 52(23), 5247-54  
CODEN: JOCEAH; ISSN: 0022-3263

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 107:236676

GI



AB Tertiary (2-hydroxyethyl)dialkylamines HOCH<sub>2</sub>CH<sub>2</sub>NRR<sub>1</sub> (R, R<sub>1</sub> = Me, CH<sub>2</sub>CH<sub>2</sub>OH) reacted with epichlorohydrin to form mixts. containing equal amts. of 2-(hydroxymethyl)-4,4-dialkylmorpholinium chlorides I and perhydro-6-hydroxy-4,4-dialkyl-1,4-oxazepinium chlorides II. Secondary (2-hydroxyethyl)alkylamines HOCH<sub>2</sub>CH<sub>2</sub>NHR<sub>3</sub> (R<sub>3</sub> = Me, CH<sub>2</sub>CH<sub>2</sub>OH) gave a 9:1

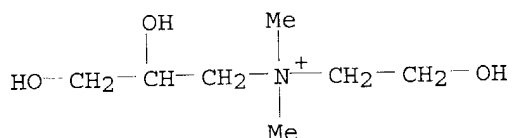
ratio of the corresponding bases III and IV, resp., in agreement with the prediction of Baldwin's rules. Methylation of a mixture of III and IV (R = Me for both) with MeCl gave a mixture of I and II (R = R1 = Me). A mechanism involving intramol. ring closure of an intermediate epoxide is discussed.

IT 110528-96-6P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of)

RN 110528-96-6 HCAPLUS

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride  
(9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

L10 ANSWER 5 OF 5 USPATFULL on STN

ACCESSION NUMBER: 2002:160892 USPATFULL

TITLE: Preparation of cationic surfactants containing ester group in molecules

INVENTOR(S): Kim, Dong-Il, Daejeon, KOREA, REPUBLIC OF  
Ha, Jeong-Wook, Daejeon, KOREA, REPUBLIC OF  
Kim, Tae-Seong, Daejeon, KOREA, REPUBLIC OF  
Rang, Moon-Jeong, Daejeon, KOREA, REPUBLIC OF

PATENT ASSIGNEE(S): LG Chemical Ltd., Seoul, KOREA, REPUBLIC OF (non-U.S. corporation)

|                     | NUMBER         | KIND | DATE                  |
|---------------------|----------------|------|-----------------------|
| PATENT INFORMATION: | US 6414170     | B1   | 20020702              |
|                     | WO 2000006679  |      | 20000210              |
| APPLICATION INFO.:  | US 2001-744349 |      | 20010123 (9)          |
|                     | WO 1999-KR407  |      | 19990727              |
|                     |                |      | 20010123 PCT 371 date |

|                       | NUMBER                                 | DATE     |
|-----------------------|--|----------|
| PRIORITY INFORMATION: | KR 1998-30208                          | 19980727 |
| DOCUMENT TYPE:        | Utility                                |          |
| FILE SEGMENT:         | GRANTED                                |          |
| PRIMARY EXAMINER:     | Killos, Paul J.                        |          |
| ASSISTANT EXAMINER:   | Tucker, Zachary                        |          |
| LEGAL REPRESENTATIVE: | Fish & Richardson P.C.                 |          |
| NUMBER OF CLAIMS:     | 9                                      |          |
| EXEMPLARY CLAIM:      | 1                                      |          |
| NUMBER OF DRAWINGS:   | 0 Drawing Figure(s); 0 Drawing Page(s) |          |
| LINE COUNT:           | 467                                    |          |

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention relates to a method for preparing a cationic

surfactant in which physical chemical characteristics such as softness, antistatic properties, etc. as well as biodegradability are quite excellent due to having an ester group and a hydrophilic hydroxyl group in its molecules. A cationic surfactant of the present invention is prepared by reacting tertiary amine derivatives, fatty acid, and epihalohydrin, and prepared simply by reacting esterification and quaternary reactions in one step with a high yield. The above cationic surfactant is a high grade alkyl quaternary ammonium compound as represented in General Formula (1), wherein R<sup>sup.1</sup> is a C<sub>sub.1</sub>-C<sub>sub.4</sub> alkyl group; R<sup>sup.2</sup> is a C<sub>sub.7</sub>-C<sub>sub.21</sub> linear or branched alkyl or alkenyl group; A is OCOR<sup>sup.3</sup>, NHCOR<sup>sup.3</sup> or OH; R<sup>sup.3</sup> is a C<sub>sub.7</sub>-C<sub>sub.21</sub> linear or branched alkyl or alkenyl group; X is a halogen atom; and n is an integral number from 2 to 6. ##STR1##

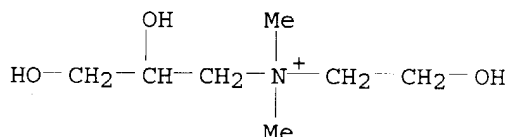
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

IT 110528-96-6DP, esters with mixts. of stearic acid and palmitic acid

(surfactant, biodegradability; cationic surfactants containing hydroxyl and ester group)

RN 110528-96-6 USPATFULL

CN 1-Propanaminium, 2,3-dihydroxy-N-(2-hydroxyethyl)-N,N-dimethyl-, chloride (9CI) (CA INDEX NAME)



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